

## **STIC Biotechnology Systems Branch**

### **RAW SEQUENCE LISTING** **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form: .

Application Serial Number: 10/521,454  
Source: PCT  
Date Processed by STIC: 02/07/2006

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.2.2 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

**<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>**

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**<http://www.uspto.gov/ebc/efs/downloads/documents.htm>**> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):  
U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

### Raw Sequence Listing Error Summary

## ERROR DETECTED

### SUGGESTED CORRECTION

**SERIAL NUMBER:**

$$\underline{10/521,454}$$

**ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE**

- |    |  |  |
|----|--|--|
| 1  | _____ Wrapped Nucleics<br>Wrapped Aminos | The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor <b>after</b> creating it. Please adjust your right margin to .3; this will prevent "wrapping."  |
| 2  | _____ Invalid Line Length                | The rules require that a line <b>not exceed</b> 72 characters in length. This includes white spaces.   |
| 3  | _____ Misaligned Amino<br>Numbering      | The numbering under each 5 <sup>th</sup> amino acid is misaligned. Do <b>not</b> use tab codes between numbers; use <b>space characters</b> , instead.   |
| 4  | _____ Non-ASCII                          | The submitted file was <b>not</b> saved in ASCII(DOS) text, as <b>required</b> by the Sequence Rules. <b>Please ensure your subsequent submission is saved in ASCII text.</b>  |
| 5  | _____ Variable Length                    | Sequence(s) _____ contain n's or Xaa's representing more than one residue. <b>Per Sequence Rules, each n or Xaa can only represent a single residue.</b> Please present the <b>maximum</b> number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.   |
| 6  | _____ PatentIn 2.0<br>"bug"              | A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. <b>This applies to the mandatory &lt;220&gt;-&lt;223&gt; sections for Artificial or Unknown sequences.</b>   |
| 7  | _____ Skipped Sequences<br>(OLD RULES)   | Sequence(s) _____ missing. If intentional, please insert the following lines for <b>each</b> skipped sequence:<br>(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)<br>(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)<br>(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)<br>This sequence is intentionally skipped<br><br>Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to <b>include</b> the skipped sequences. |
| 8  | _____ Skipped Sequences<br>(NEW RULES)   | Sequence(s) _____ missing. If <b>intentional</b> , please insert the following lines for <b>each</b> skipped sequence.<br><210> sequence id number<br><400> sequence id number<br>000  |
| 9  | _____ Use of n's or Xaa's<br>(NEW RULES) | <u>Use of n's and/or Xaa's have been detected in the Sequence Listing.</u><br><u>Per 1.823 of Sequence Rules, use of &lt;220&gt;-&lt;223&gt; is MANDATORY if n's or Xaa's are present.</u><br><u>In &lt;220&gt; to &lt;223&gt; section, please explain location of n or Xaa, and which residue n or Xaa represents.</u>  |
| 10 | _____ Invalid <213><br>Response          | Per 1.823 of Sequence Rules, the only <b>valid</b> <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is <b>required</b> when <213> response is Unknown or is Artificial Sequence  |
| 11 | _____ Use of <220>                       | Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.<br>(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)   |
| 12 | _____ PatentIn 2.0<br>"bug"              | Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.  |
| 13 | _____ Misuse of n/Xaa                    | "n" can <b>only</b> represent a single nucleotide; "Xaa" can <b>only</b> represent a single amino acid   |



PCT

## RAW SEQUENCE LISTING

DATE: 02/07/2006

PATENT APPLICATION: US/10/521,454

TIME: 12:45:33

Input Set : A:\2005-11-10 0230-0222PUS1.ST25.txt

Output Set: N:\CRF4\02012006\J521454.raw

```

3 <110> APPLICANT: Ichiro HIRAO et al.
5 <120> TITLE OF INVENTION: NUCLEOSIDES OR NUCLEOTIDES HAVING NOVEL UNNATURAL BASES AND USE
3REOF
7 <130> FILE REFERENCE: 0230-0222PUS1
9 <140> CURRENT APPLICATION NUMBER: US 10/521,454
10 <141> CURRENT FILING DATE: 2005-01-14
12 <150> PRIOR APPLICATION NUMBER: JP 2002-208568
13 <151> PRIOR FILING DATE: 2002-07-17
15 <160> NUMBER OF SEQ ID NOS: 14
17 <170> SOFTWARE: patentin 3.3
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 100
21 <212> TYPE: RNA
22 <213> ORGANISM: Artificial sequence
24 <220> FEATURE:
25 <223> OTHER INFORMATION: RNA aptamer
27 <400> SEQUENCE: 1
28 gggaguggag gaaucaucg aggcauangu cgacuccguc uuccuucaaa ccaguauaaa 60
29 auugguuuuu gcauaugccu uagcgacagc aagcuucugc 100
32 <210> SEQ ID NO: 2
33 <211> LENGTH: 39
34 <212> TYPE: DNA
35 <213> ORGANISM: Artificial sequence
37 <220> FEATURE:
38 <223> OTHER INFORMATION: Designed primer for PCR
40 <400> SEQUENCE: 2
41 ggtaatacga ctactatag ggagtggagg aattcatcg 39
44 <210> SEQ ID NO: 3
45 <211> LENGTH: 29
46 <212> TYPE: DNA
47 <213> ORGANISM: Artificial sequence
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Designed primer for PCR
52 <400> SEQUENCE: 3
53 gcagaagctt gctgtcgcta aggcataatg 29
56 <210> SEQ ID NO: 4
57 <211> LENGTH: 29
58 <212> TYPE: DNA
59 <213> ORGANISM: Artificial sequence
61 <220> FEATURE:
62 <223> OTHER INFORMATION: Designed primer for PCR
64 <220> FEATURE:
65 <221> NAME/KEY: misc_feature
66 <222> LOCATION: (17)..(17)

```

Does Not Comply  
Corrected Diskette Needed  
(pg-2)

## RAW SEQUENCE LISTING

DATE: 02/07/2006

PATENT APPLICATION: US/10/521,454

TIME: 12:45:33

Input Set : A:\2005-11-10 0230-0222PUS1.ST25.txt

Output Set: N:\CRF4\02012006\J521454.raw

67 <223> OTHER INFORMATION: n means 2-amino-6-(2-thienyl)-purine-9-yl  
 69 <400> SEQUENCE: 4  
 -> 70 gcagaagctt gctgtcncta aggcata<sup>29</sup>tg  
 73 <210> SEQ ID NO: 5  
 74 <211> LENGTH: 29  
 75 <212> TYPE: DNA  
 76 <213> ORGANISM: Artificial sequence  
 78 <220> FEATURE:  
 79 <223> OTHER INFORMATION: Designed primer for PCR  
 81 <220> FEATURE:  
 82 <221> NAME/KEY: misc\_feature  
 83 <222> LOCATION: (14)..(14)  
 84 <223> OTHER INFORMATION: n means 2-amino-6-(2-thienyl)-purine-9-yl  
 86 <400> SEQUENCE: 5  
 -> 87 gcagaagctt gctntcgcta aggcata<sup>29</sup>tg  
 90 <210> SEQ ID NO: 6  
 91 <211> LENGTH: 29  
 92 <212> TYPE: DNA  
 93 <213> ORGANISM: Artificial sequence  
 95 <220> FEATURE:  
 96 <223> OTHER INFORMATION: Designed primer for PCR  
 98 <220> FEATURE:  
 99 <221> NAME/KEY: misc\_feature  
 100 <222> LOCATION: (9)..(9)  
 101 <223> OTHER INFORMATION: n means 2-amino-6-(2-thienyl)-purine-9-yl  
 103 <400> SEQUENCE: 6  
 -> 104 gcagaagc<sup>n</sup>nt gctgtcgcta aggcata<sup>29</sup>tg  
 107 <210> SEQ ID NO: 7  
 108 <211> LENGTH: 29  
 109 <212> TYPE: DNA  
 110 <213> ORGANISM: Artificial sequence  
 112 <220> FEATURE:  
 113 <223> OTHER INFORMATION: Designed primer for PCR  
 115 <220> FEATURE:  
 116 <221> NAME/KEY: misc\_feature  
 117 <222> LOCATION: (17)..(17)  
 118 <223> OTHER INFORMATION: n means 2-amino-6-(2-thienyl)-purine-9-yl  
 120 <400> SEQUENCE: 7  
 -> 121 gcagaagc<sup>n</sup>nt gctgtcncta aggcata<sup>29</sup>tg  
 124 <210> SEQ ID NO: 8  
 125 <211> LENGTH: 35  
 126 <212> TYPE: DNA  
 127 <213> ORGANISM: Artificial sequence  
 129 <220> FEATURE:  
 130 <223> OTHER INFORMATION: Synthesized template strand for transcription  
 132 <220> FEATURE:  
 133 <221> NAME/KEY: misc\_feature  
 134 <222> LOCATION: (29)..(29)  
 135 <223> OTHER INFORMATION: n means 2-amino-6-(2-thienyl)-purine-9-yl

n can represent  
 only single nucleotide  
 See Item 13 on  
 Summary  
 Error  
 sheet.

Explain this location.  
 See Item #9 on Error  
 Summary  
 sheet.

## RAW SEQUENCE LISTING

DATE: 02/07/2006

PATENT APPLICATION: US/10/521,454

TIME: 12:45:33

Input Set : A:\2005-11-10 0230-0222PUS1.ST25.txt

Output Set: N:\CRF4\02012006\J521454.raw

```

137 <400> SEQUENCE: 8
-> 138 tattatgctg agtgatatcc ctccttctnt ctcgt          35
141 <210> SEQ ID NO: 9
142 <211> LENGTH: 35
143 <212> TYPE: DNA
144 <213> ORGANISM: Artificial sequence
146 <220> FEATURE:
147 <223> OTHER INFORMATION: Synthesized template strand for transcription
149 <400> SEQUENCE: 9
150 tattatgctg agtgatatcc ctccttctat ctcgt          35
153 <210> SEQ ID NO: 10
154 <211> LENGTH: 28
155 <212> TYPE: DNA
156 <213> ORGANISM: Artificial sequence
158 <220> FEATURE:
159 <223> OTHER INFORMATION: Designed primer for transcription
161 <400> SEQUENCE: 10
162 ataatcgact ctactatagg gaggaaga          28
165 <210> SEQ ID NO: 11
166 <211> LENGTH: 200
167 <212> TYPE: RNA
168 <213> ORGANISM: Artificial sequence
170 <220> FEATURE:
171 <223> OTHER INFORMATION: RNA aptamer 9A
173 <400> SEQUENCE: 11
174 gggaguggag gaaucaucg aggcauau gu cgacuccguc uuccuucaaa ccaguauaua          60
176 auugguuuuu gcauauugccu uagcgacagc aagcuucugc gggaguggag gaaucaucg          120
178 aggcauau gu cgacuccguc uuccuucaaa ccaguauaua auugguuuuu gcauauugccu          180
180 uagcgacagc aagcuucugc          200
183 <210> SEQ ID NO: 12
184 <211> LENGTH: 101
185 <212> TYPE: RNA
186 <213> ORGANISM: Artificial sequence
188 <220> FEATURE:
189 <223> OTHER INFORMATION: RNA aptamer 2x9A
191 <400> SEQUENCE: 12
192 gggaguggag gaaucaucg aggcauugc gaaccuau uugcuuuugg uagcuguauu          60
194 caccuguaac agcauauugc uagcgacag caagcuucug c          101
196 <210> SEQ ID NO: 13
197 <211> LENGTH: 15
198 <212> TYPE: RNA
199 <213> ORGANISM: Artificial sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Synthetic RNA 15-mer
204 <220> FEATURE:
205 <221> NAME/KEY: misc_feature
206 <222> LOCATION: (11)..(11)
207 <223> OTHER INFORMATION: n is a, g, c, u, unknown or other
209 <400> SEQUENCE: 13

```

## RAW SEQUENCE LISTING

DATE: 02/07/2006

PATENT APPLICATION: US/10/521,454

TIME: 12:45:33

Input Set : A:\2005-11-10 0230-0222PUS1.ST25.txt

Output Set: N:\CRF4\02012006\J521454.raw

```
-> 210 gggaggaaga nagag      15
213 <210> SEQ ID NO: 14
214 <211> LENGTH: 17
215 <212> TYPE: RNA
216 <213> ORGANISM: Artificial sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Synthetic RNA 17-mer
221 <220> FEATURE:
222 <221> NAME/KEY: misc_feature
223 <222> LOCATION: (11)..(11)
224 <223> OTHER INFORMATION: n is a, g, c, u, unknown or other
226 <400> SEQUENCE: 14
-> 227 gggaggaaga nagagca    17
```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/521,454

DATE: 02/07/2006  
TIME: 12:45:34

Input Set : A:\2005-11-10 0230-0222PUS1.ST25.txt  
Output Set: N:\CRF4\02012006\J521454.raw

Please Note:

One or more of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 17  
Seq#:5; N Pos. 14  
Seq#:6; N Pos. 9  
Seq#:7; N Pos. 9,17  
Seq#:8; N Pos. 29  
Seq#:13; N Pos. 11  
Seq#:14; N Pos. 11

## VERIFICATION SUMMARY

DATE: 02/07/2006

PATENT APPLICATION: US/10/521,454

TIME: 12:45:34

Input Set : A:\2005-11-10 0230-0222PUS1.ST25.txt

Output Set: N:\CRF4\02012006\J521454.raw

70 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0  
37 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0  
104 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0  
121 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0  
138 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0  
210 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0  
227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:0